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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,620	08/15/2001	Chad A. Mirkin	00-714-G	9430
20306	7590	02/12/2004	EXAMINER	
MCDONNELL BOEHNEN HULBERT & BERGHOFF			HARLAN, ROBERT D	
300 SOUTH WACKER DRIVE			ART UNIT	
SUITE 3200			PAPER NUMBER	
CHICAGO, IL 60606			1713	

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,620

Applicant(s)

MIRKIN ET AL.

Examiner

Robert D. Harlan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) ⁸⁵~~1-42~~ is/are pending in the application.
4a) Of the above claim(s) 43-85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,7,8,13,15,18,19,26,31,34,35,41 and 42 is/are rejected.
- 7) ☒ Claim(s) 2-6,9-12,14,16,17,20-25,27-30,32,33 and 36-40 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-42 in Response filed on 10/28/03 is acknowledged. The traversal is on the ground(s) that unity of invention exists between Groups I, III and IV because the claims of Group III and IV depend from claim 40 of Group I. This is not found persuasive because dependency is not the basis for unity of invention. Group I contains claims with the same technical feature, which is not a part of Group III and IV.

2. The requirement is still deemed proper and is therefore made FINAL.

3. This application contains claims drawn to an invention nonelected with traverse in Response filed on 10/28/03. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144)

See MPEP § 821.01.

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Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The following claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. In claim 1, what is a "nanoparticle?" The prefix "nano-" can have many definitions. A nano can be interpreted as 10^{-9} of a particular physical quantity (i.e. meter, gallon, second). A nano can also be interpreted as something that occurs on a billionth scale (i.e. nanotechnology, nanoscale). Furthermore, any particle can be describe as a nanoparticle just as long as the quantity is describe as nano (for example a desk can be a describe as 1,000,000 nanometer in length or a car can have a speed of 500, 000 nanometers per second). To remedy any foreseeable indefiniteness it is suggested that the Applicants replace the term "nanoparticle" with -- a particle have a

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diameter of __ nm to __ nm--. In the opinion of the Examiner, "nanoparticle" is open to many interpretations.

7. In claims 1, 7, 8, 15, 18, 19, 31 and 41-42 the Applicants recite "type of nanoparticles" and "type of initiation monomers." The addition of the word "type" to an otherwise definite expression extends the scope of the expression so as to render it indefinite. It is suggested that the Applicants delete the term "type."

8. In claim 8, line 3, and claim 26 and 34-35, the Applicants recite "them." This is a improper pronoun reference. Please correct.

9. In claim 8, last line, the Applicants recite "a selected property or properties." This is indefinite; please choose one.

10. In claim 13, the Applicants recite, "halogen substituted derivatives of each, and silicon-containing analogs of each." What does "each" refer? What is an silicon-containing analogs (also, claim 14)?

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11. Claims 41-42 are not proper dependent claims because claim 40 does not recited the requisite limitations and is written in a redundant format.

Claim Objections

12. Claims 2-6, 9-12, 14, 16, 17, 20-25, 27-30, 32, 33 and 36-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

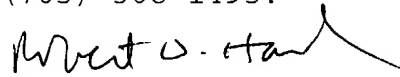
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert D. Harlan whose telephone number is (571) 272-1102. The examiner can normally be reached on Mon-Fri, 10 AM - 8 PM.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone numbers for the organization where this application or proceeding is assigned

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are (571) 273-1102 for regular communications and (571) 273-1102 for After Final communications.

15. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1495.


Robert D. Harlan
Primary Examiner
Art Unit 1713

rdh
February 8, 2004